

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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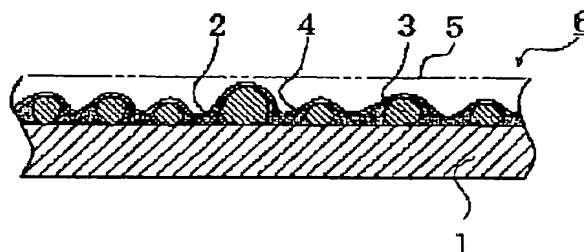
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APPLICANT : GUNZE LTD;

INVENTOR : YAMAMOTO MASANORI;

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TITLE : MANUFACTURE OF TRANSPARENT  
FILM SUBSTRATE FOR TOUCH SIDE  
OF TOUCH PANEL



ABSTRACT : PROBLEM TO BE SOLVED: To reduce the optical reflection on a touch input face, to improve the transparency, to reduce the imaging, and to reduce the scratching and abrasion by an pen input operation, by roughening a touch input face side to a specific surface roughness, and then coating the same with a transparent metallic compound or synthetic resin in the adhering condition.

SOLUTION: A hard layer 2 in which the transparent fine powder 3 of less than 1.7 of refractive index, is dispersed in a transparent hardenable polymer which is preferably a polymer of a polyfunctional acryl monomer, is formed on a transparent film base 1 by a spin coater, a roll coater or the like. The center line average roughness of the surface of the hard layer 2 is 0.05-0.8 $\mu$ m. An adhesion layer 4 of the transparent metallic compound or synthetic resin, is adhered on the hard layer 2 in such manner that the rough face is remained. Preferably the metallic oxide such as SiO<sub>2</sub>, In<sub>2</sub>O<sub>5</sub>, Ta<sub>2</sub>O<sub>3</sub>, SnO<sub>2</sub>, ZnO, Al<sub>2</sub>O<sub>3</sub> or MgO having not more than 2.3 of refractive index, is used as the metallic compound, and a hardneable organopolysiloxane or the like of not more than 1.6 of refractive index, is used as the synthetic resin.

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